

## CLAIMS

- 1 1. A video object encoding system, comprising:  
2 an object evaluation system that evaluates a video object using a predetermined  
3 criterion; and  
4 a mask generation system that generates one of a plurality of mask types for the  
5 video object based on the evaluation of the video object.
- 1 2. The video object encoding system of claim 1, wherein the plurality of mask types  
2 includes a pixel-based mask, a bounding box mask, and a macroblock-based mask.
- 1 3. The video object encoding system of claim 1, wherein the predetermined criterion  
2 examines a shape of the video object.
- 1 4. The video object encoding system of claim 1, wherein the predetermined criterion  
2 examines a texture of the video object.
- 1 5. The video object encoding system of claim 1, wherein the predetermined criterion  
2 examines motion information regarding the video object.
- 1 6. The video object encoding system of claim 3, wherein the predetermined criterion  
2 includes whether the video object shape is substantially circular.

1 7. The video object encoding system of claim 3, wherein the predetermined criterion  
2 includes whether an area of the video object shape is substantially similar to an area of a  
3 generated bounding box.

1 8. The video object encoding system of claim 7, wherein the predetermined criterion  
2 includes whether an area of a macroblock-based shape generated for the video object is  
3 substantially similar to the area of the generated bounding box.

1 9. The video object encoding system of claim 8, wherein the predetermined criterion  
2 includes whether the area of a macroblock-based shape is larger than the area of the video  
3 object shape.

1 10. The video object encoding system of claim 1, further comprising an MPEG-4  
2 encoder.

- 1 11. A program product stored on a recordable medium, which when executed, encodes  
2 video objects, the program product comprising:  
3       program code configured to evaluate a video object using a predetermined  
4 criterion; and  
5       program code configured to generate one of a plurality of mask types for the  
6 video object based on the evaluation of the video object.
- 1 12. The program product of claim 11, wherein the plurality of mask types includes a  
2 pixel-based mask, a bounding box mask, and a macroblock-based mask.
- 1 13. The program product of claim 11, wherein the predetermined criterion examines a  
2 shape of the video object.
- 1 14. The program product of claim 11, wherein the predetermined criterion examines a  
2 texture of the video object.
- 1 15. The program product of claim 11, wherein the predetermined criterion examines  
2 motion information regarding the video object.
- 1 16. The program product of claim 13, wherein the predetermined criterion includes  
2 whether the video object shape is substantially circular.

1 17. The program product of claim 13, wherein the predetermined criterion includes  
 2 whether an area of the video object shape is substantially similar to an area of a generated  
 3 bounding box.

1 18. The program product of claim 17, wherein the predetermined criterion includes  
 2 whether an area of a macroblock-based shape generated for the video object is  
 3 substantially similar to the area of the generated bounding box.

1 19. The program product of claim 18, wherein the predetermined criterion includes  
 2 whether the area of a macroblock-based shape is larger than the area of the video object  
 3 shape.

1 20. A method for encoding video objects in an object based video communication  
 2 system, comprising the steps of:  
 3 evaluating a video object using a predetermined criterion; and  
 4 generating one of a plurality of mask types for the video object based on the  
 5 evaluation of the video object.

1 21. The method of claim 20, wherein the plurality of mask types includes a pixel-based  
 2 mask, a bounding box mask, and a macroblock-based mask.

1 22. The method of claim 20, wherein the predetermined criterion examines a shape of  
 2 the video object.

1 23. The method of claim 20, wherein the predetermined criterion examines a texture of  
 2 the video object.

1 24. The method of claim 20, wherein the predetermined criterion examines motion  
 2 information regarding the video object.

1 25. The method of claim 22, wherein the evaluating step includes determining if the  
 2 shape is substantially circular.

1 26. The method of claim 22, wherein the evaluating step includes:  
2 generating a bounding box; and  
3 determining if an area of the object shape is substantially similar to an area of the  
4 generated bounding box.

1 27. The method of claim 26, wherein the evaluating step includes:  
2 generating a macroblock-based shape; and  
3 determining whether an area of the macroblock-based shape is substantially  
4 similar to the area of the generated bounding box.

1 28. The method of claim 27, wherein the evaluating step includes determining whether  
2 the area of a macroblock-based shape is larger than the area of the object shape.